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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/055,351	01/22/2002	Gert W. Bruning	US020023	9279

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EXAMINER

NGUYEN, JENNIFER T

ART UNIT

PAPER NUMBER

2674

DATE MAILED: 10/06/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/055,351	BRUNING ET AL.	
	Examiner	Art Unit	
	Jennifer T Nguyen	2674	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) Responsive to communication(s) filed on 22 January 2002.

2a) This action is FINAL. 2b) This action is non-final.

3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) Claim(s) 1-25 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) Claim(s) _____ is/are allowed.

6) Claim(s) 1-25 is/are rejected.

7) Claim(s) _____ is/are objected to.

8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) The specification is objected to by the Examiner.

10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11) The proposed drawing correction filed on _____ is: a) approved b) disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12) The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a) All b) Some * c) None of:

1. Certified copies of the priority documents have been received.

2. Certified copies of the priority documents have been received in Application No. _____.

3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) The translation of the foreign language provisional application has been received.

15) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) Notice of References Cited (PTO-892)

2) Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) Information Disclosure Statement(s) (PTO-1449) Paper No(s) 3.

4) Interview Summary (PTO-413) Paper No(s). _____.

5) Notice of Informal Patent Application (PTO-152)

6) Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cole et al. (U.S. Patent No. 6,496,236) in view of Yamamoto et al. (U.S. Patent No. 6,313,586), cited by Applicant.

Regarding claims 1, 10, and 19, referring to Figs. 1 and 2, Cole teaches a liquid crystal display panel system (20) responsive to a highlighting request comprising: a lamp (30, 32) providing lighting to the liquid crystal display panel (20), the lamp (30, 32) having a normal mode and a highlighting mode (i.e., high mode); a power unit (60) operatively coupled to the lamp (30, 32), the power unit (60) providing current to the lamp (30, 32), the power unit (60) being responsive to a control signal; and a user interface (not shown) operatively coupled to the power unit (60), the user interface providing the control signal to the power unit (60) (col. 2, lines 19-67 and from col. 3, line 1 to col. 5, line 5).

Cole differs from claims 1, 10, and 19 in that he does not specifically teach the intermediate control signal causing the power unit to increase the current to the lamp from normal mode current to an intermediate current above highlighting mode current, then to decrease the intermediate current to the highlighting mode current. However, referring to Fig. 3, Yamamoto teaches intermediate control signal causing the power unit (13) to increase the current

to the lamp (11) from normal mode current to an intermediate current (i.e., overcurrent) above highlighting mode current (i.e., predetermined current), then to decrease the intermediate current (i.e., overcurrent) to the highlighting mode current (i.e., predetermined current) (from col. 3, line 39 to col. 4, line 21). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the intermediate control signal causing the power unit to increase the current to the lamp from normal mode current to an intermediate current above highlighting mode current, then to decrease the intermediate current to the highlighting mode current as taught by Yamamoto in the system of Cole in order to providing rapid highlight and reduce a stand by consumption power.

Regarding claims 2 and 11, the combination of Cole and Yamamoto teaches the intermediate control signal causes the power unit (13) to increase the current to the lamp (11) from normal mode current to an intermediate current (i.e., overcurrent) above highlighting mode current (i.e., predetermined current) in a step change, then to decrease the current to the lamp (11) exponentially to the highlighting mode current (i.e., predetermined current) (from col. 3, line 39 to col. 4, line 21 of Yamamoto).

Regarding claims 3, 12, 20 and 23, the combination of Cole and Yamamoto further teaches the intermediate control signal causes the power unit (13) to increase the current to the lamp (11) from normal mode current to an intermediate current (i.e., overcurrent) above highlighting mode current (i.e., predetermined current) in a step change, to hold the intermediate current (i.e., overcurrent) for a predetermined time, then to decrease the current to the lamp (11) linearly to the highlighting mode current (i.e., predetermined current) (col. 4, lines 1-9 of Yamamoto).

Regarding claims 4 and 13, the combination of Cole and Yamamoto differs from claims 4 and 13 in that it does not specifically teach the integrated area under an intermediate current-time curve is maximized for the characteristics of the lamp. However, Yamamoto teaches the intermediate current-time curve is higher than the highlighting mode characteristics of the lamp (from col. 3, line 39 to col. 4, line 21 of Yamamoto). Therefore, it would have been obvious to obtain the integrated area under an intermediate current-time curve is maximized for the characteristics of the lamp in order to provide a quick highlight and increase the lamp lifetime.

Regarding claims 5 and 14, Cole further teaches that the power unit (60) comprises a power supply supplying DC output voltage to an inverter (54), the inverter (54) providing current to the lamp (30, 32) (col. 2, lines 19-32).

Regarding claims 6 and 15, Cole further teaches the power supply (60) controls the current to lamp by varying DC output voltage in response to the control signal (col. 2, lines 5-67).

Regarding claims 7 and 16, Cole further teaches in response to the control signal, the inverter (54) controls the current to lamp by varying a current parameter selected from the group consisting of frequency, phase, pulse width modulation, and a combination thereof (col. 2, lines 19-67 and from col. 3, line 1 to col. 5, line 5).

Regarding claims 8 and 17, Cole further teaches an LC driver (not shown) responsive to a highlight area control signal from the user interface; and the liquid crystal display panel (20) having a highlight section (40); wherein the LC driver controls lighting of highlight section of the liquid crystal display panel (20) (col. 2, lines 19-67 and from col. 3, line 1 to col. 5, line 5).

Regarding claims 9, 18 and 24, the combination of Cole and Yamamoto teaches a lamp

output sensor monitoring light output of the lamp and providing a lamp output feedback signal, the lamp output feedback signal controlling the intermediate control signal (from col. 3, line 39 to col. 4, line 21 of Yamamoto).

Regarding claims 21 and 22, the combination of Cole and Yamamoto teaches increasing current to the lamp (11) from normal mode current further comprises increasing current by an increase selected from the group consisting of a step increase, a linear increase, and an exponential increase (from col. 3, line 39 to col. 4, line 21 of Yamamoto).

Regarding claim 25, the combination of Cole and Yamamoto differs from claim 25 in that it does not specifically teach decreasing the current to the lamp from highlighting mode current to an intermediate current below normal mode current, then to increase the intermediate current to the normal mode current. However, Yamamoto teaches increasing the current to the lamp (11) from normal mode current to an intermediate current (i.e., overcurrent) above highlighting mode current (i.e., predetermined current), then to decrease the intermediate current (i.e., overcurrent) to the highlighting mode current (i.e., predetermined current) (from col. 3, line 39 to col. 4, line 21). In a similar manner, it would have been obvious to obtain decreasing the current to the lamp from highlighting mode current to an intermediate current below normal mode current, then to increase the intermediate current to the normal mode current in order to providing rapid remove the highlight section and reduce a stand by consumption power.

3. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Whitehead (U.S. Patent number 4,733,229) teaches highlighting gray scale video display terminal.

Onitsuka et al. (U.S. Patent number 5,808,597) teaches illumination device for LCD.

Eglit (U.S. Patent number 5,734,362) teaches brightness control for LCD.

Johnson et al. (U.S. Patent number 5,907,742) teaches lamp control scheme for rapid warm-up of fluorescent lamp in office equipment.

Callway (U.S. Patent number 6,184,861) teaches method and apparatus for processing video and graphics data utilizing intensity scaling.

Toshitaka (Japanese Patent number 2000-214838) teaches display.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Jennifer T. Nguyen** whose telephone number is **703-305-3225**. The examiner can normally be reached on Mon-Fri from 9:00-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, **Richard A Hjerpe** can be reached at **703-305-4709**.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks
Washington, DC. 20231

Or faxed to: 703-872-9306 (for Technology Center 2600 only)

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA, sixth-floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or proceeding

should be directed to the Technology Center 2600 Customer Service Office whose telephone number is 703-306-0377.

Jennifer T. Nguyen
09/28/2003



RICHARD HJERPE
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600